

## Low Temperature Method for Forming a Thin, Uniform Oxide

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### ABSTRACT

This invention pertains generally to forming thin oxides at  
5 low temperatures, and more particularly to forming uniformly  
thick, thin oxides. We disclose a low temperature method for  
forming a thin, uniform oxide **16** on a silicon surface **12**. This  
method includes providing a partially completed integrated  
circuit on a semiconductor substrate **10** with a clean, hydrogen  
10 terminated or atomically flat, silicon surface **12**; and  
stabilizing the substrate at a first temperature. The method  
further includes exposing the silicon surface to an atmosphere **14**  
including ozone, while maintaining the substrate **10** at the first  
temperature. In this method, the exposing step creates a  
15 uniformly thick, oxide film **16**. This method is suitable for room  
temperature processing.